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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,968	03/23/2005	Keisuke Okamura	450100-04764	9036

7590 02/04/2009

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EXAMINER	
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ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
02/04/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,968	OKAMURA, KEISUKE	
	Examiner	Art Unit	
	Nelson D. Hernández Hernández	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Examiner acknowledges the amended claims filed on November 17, 2008. **Claims 1-16 and 18-38** have been amended. **Claim 17** has been cancelled.

Response to Arguments

2. Applicant's arguments with respect to **claims 1, 10, 23, and 33** have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada, JP 2002-084449 in view of Kusaka et al., US Patent 7,466,358 B1.

5. **Regarding claim 1**, Okada discloses an image pickup apparatus (*Fig. 1*) comprising:

an image pickup device (*Fig. 1: 1*) for picking up an image of a subject;

a signal processing section (*CPU 20 in conjunction with synthetic circuit 7 as shown in fig. 1*) for generating a composite, the composite image having a relatively wider dynamic range than at least either dynamic range of a long-time exposure image picked up with a relatively long exposure time by said image pickup device or a dynamic range of a short-time exposure image picked up with a relatively short exposure time by said image pickup device, by synthesizing said long-time exposure image and said short-time exposure image (*English Machine Translation, page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*); and

a control section (*Gradation compression circuit 44 in conjunction with the coefficient value calculation circuit 45 as shown in fig. 7*) for compressing said composite image and dynamically varying an assignment proportion of a high luminance dynamic range to a low-middle luminance dynamic range in a dynamic range of an output image to be outputted as a video signal (*English Machine Translation, page 6-7, ¶ 0045-0054; see also page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*).

Okada does not explicitly disclose that an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same.

However, Kusaka et al. discloses an imaging device (*See fig. 1*), having an image processing section (*Fig. 1: 7*) for generating a composite image, the composite image having a relatively wider dynamic range than at least either a dynamic range of a

long-time exposure image picked up with a relatively long exposure time by said image pickup device or a dynamic range of a short-time exposure image picked up with a relatively short exposure time by said image pickup device, by synthesizing said long-time exposure image and said short-time exposure image. Kusaka further discloses that an exposure ratio (*D = TL/TS; see col. 10, lines 30-55*) of the relatively long exposure time (*TL; see col. 10, lines 30-55*) to the relatively short exposure time (*TS; see col. 10, lines 30-55*) is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same (*Kasuko discloses multiplying the short signal by a gain equivalent to the ratio in the amount of exposed light to the long signal (the ratio in exposure time) as shown in fig. 8c, and synthesizing them allowing expansion of the dynamic range. For example, when the ratio in the amount of exposure of the long signal to the short signal is 1:D, the dynamic range can be expanded by D times; see col. 6, line 63 – col. 7, line 32; col. 10, lines 30-55; col. 21, lines 25-57*) (*The Examiner further notes that the claim recites "an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image <u>so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same</u>". It is noted that the recitation "<u>so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same</u>" appears to be an intended use for the multiplication of the ratio by the short-time exposure image.*

The new intended use for an old product does not make a claim to that old product patentable." In re Schreiber, 44 USPQ2d 1429 (Fed. Cir. 1997)).

Therefore, taking the combined teaching of Okada in view of Kusaka et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of multiply the short-time exposure image by a ratio of the long signal time to the short signal time so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same as taught in Kusaka et al. to modify the teaching of Okada to have an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same. The motivation to do so would have been to allow further expansion of the dynamic range as suggested by Kusaka et al., (*See col. 6, line 63 – col. 7, line 32; col. 10, lines 30-55; col. 21, lines 25-57*).

6. **Regarding claim 3**, the combined teaching of Okada in view of Kusaka et al. as discussed and analyzed in claim 1 further teaches that said control section corrects said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range each time said composite image is generated (*See Okada, English Machine Translation, page 6-7, ¶ 0045-0054; see also page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*).

7. **Regarding claim 10**, limitations have been discussed and analyzed in claim 1.

8. **Regarding claim 12**, limitations have been discussed and analyzed in claim 1.

9. Claims 2, 4-9, 11, 13-16, and 18-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada, JP 2002-084449 in view of Kusaka et al., US Patent 7,466,358 B1 an further in view of Tsukui, US Patent 5,589,880.

10. **Regarding claim 2**, although Okada discloses that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least the luminance proportion in the image (*English Machine Translation, page 6-7, ¶ 0045-0054*), the combined teaching of Okada in view of Kusaka et al. does not explicitly disclose that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least a luminance region which occupies said composite image.

However, Tsukui discloses an image pickup apparatus (*Figs. 6 and 10*) characterized by comprising:

an image pickup device (*3 and 4 as shown in figs. 6 and 10*) for picking up an image of a subject;

a signal processing section (*Fig. 10: 50*) for generating a composite image from two images captured at different exposure times to increase the dynamic range of the image (*Col. 15, line 34 – col. 16, line 3*). Tsukui further discloses dynamically varying

the assignment proportion of a high luminance dynamic range to a low-middle luminance dynamic range in a dynamic range of an output image to be outputted as a video signal (*Col. 10, lines 29-53; col. 11, lines 56-67; col. 12, lines 49-65; col. 13, lines 4-23; col. 14, lines 27-54; col. 15, lines 34-62*), wherein said dynamically varying the assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range is made according to at least a luminance region which occupies said composite image (*Tsukui teaches that based on the proportion of high luminance area with respect to the proportion of low luminance area, a predetermined coefficient is multiplied to the different image signals when combining the signals to create the composed image having higher dynamic range; col. 15, line 34 – col. 16, line 3*). Tsukui further discloses that this is done to produce an image of good color reproducibility without any solid blackening or solid whitening can be obtained even for an object high in contrast and since the composite video signal is obtained from the summed output video signals of the multipliers the output video signal level of the television camera can be made continuously change with the illumination of an object (*Col. 16, lines 38-49*).

Therefore, taking the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of dynamically varying the assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range is made according to at least a luminance region which occupies said composite image as taught in Tsukui to modify the teaching of

Okada and Kusaka et al. to have control section dynamically varying said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least a luminance region which occupies said composite image. The motivation to do so would have been to produce an image of good color reproducibility without any solid blackening or solid whitening can be obtained even for an object high in contrast and since the composite video signal is obtained from the summed output video signals of the multipliers the output video signal level of the television camera can be made continuously change with the illumination of an object as suggested by Tsukui (*Col. 16, lines 38-49*).

11. **Regarding claim 4**, the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as discussed and analyzed in claim 2 further teaches that said luminance region is at least either a high luminance region or a low-middle luminance region (*Tsukui, col. 10, lines 29-53; col. 11, lines 56-67; col. 12, lines 49-65; col. 13, lines4-23; col. 14, lines 27-54; col. 15, lines 34-62*).

12. **Regarding claim 5**, the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as discussed and analyzed in claim 2 further teaches that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least an average luminance signal level of a high luminance region which occupies said composite image (*Tsukui discloses dynamically varies said assignment proportion of*

said high luminance dynamic range to said low-middle luminance dynamic range according to an average luminance signal level of said high luminance region which occupies said composite image; col. 13, lines 4-23).

13. **Regarding claim 6**, although is not explicitly disclose in the Tsukui reference dynamically adjusting the dynamic range of the image based on the average luminance signal level of said low luminance, one of an ordinary skill in the art would find obvious to modify the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui to use the average of the low luminance region which occupies said composite image as an alternative to the average of the high luminance region which occupies said composite image discussed in Tsukui while obtaining similar results as a matter of design choice.

14. **Regarding claim 7**, limitations have been discussed and analyzed in claim 5.

15. **Regarding claim 8**, limitations have been discussed and analyzed in claim 6.

16. **Regarding claim 9**, the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as discussed and analyzed in claim 2 further teaches said control section at least monotonically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range (*As taught in Okada, fig. 4, the adjustment made to the proportion of said high luminance is*

varied monotonically by using a circuit that performs the equation Y_S *x (1-k) +* Y_L *x k that would result in a monotonic adjustment of the proportion of said high luminance dynamic range to said low-middle luminance dynamic range; Machine English Translation, ¶ 0032-0035*).

17. **Regarding claim 11**, limitations have been discussed and analyzed in claim 2.

18. **Regarding claim 13**, limitations have been discussed and analyzed in claim 5.

19. **Regarding claim 14**, limitations have been discussed and analyzed in claim 2.

20. **Regarding claim 15**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 2 further teaches that said dynamic range is at least either a high luminance dynamic range or a low-middle luminance dynamic range (*Tsukui, col. 10, lines 29-53; col. 11, lines 56-67; col. 12, lines 49-65; col. 13, lines4-23; col. 14, lines 27-54; col. 15, lines 34-62*).

21. **Regarding claim 16**, limitations have been discussed and analyzed in claim 5.

22. **Regarding claim 18**, the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as discussed and analyzed in claim 2 further teaches that said control section dynamically assigns a section of said high luminance dynamic

range of said output image to said low-middle luminance dynamic range according to at least a decrease of a high luminance region which occupies said composite image (*Tsukui discloses assigning coefficients to be multiplied by the two signals based on the luminance level of the signals, wherein the sum of said coefficients is equal to 1 so that when the luminance of the high brightness image signal is increased the coefficient for the high brightness signal is reduced while the coefficient for the low brightness image signal is increased and vice versa; col. 15, line 34 – col. 16, line 3*).

23. **Regarding claim 19**, limitations have been discussed and analyzed in claim 18.

24. **Regarding claim 20**, limitations have been discussed and analyzed in claim 18.

25. **Regarding claim 21**, limitations have been discussed and analyzed in claim 18.

26. **Regarding claim 22**, limitations have been discussed and analyzed in claim 9.

27. **Regarding claim 23**, Okada discloses an image pickup apparatus (*Fig. 1*) characterized by comprising:

an image pickup device (*Fig. 1: 1*) for picking up an image of a subject;

a detection section (*CPU 20 as shown in fig. 1*) for detecting an image signal of a long-time exposure image picked up with a relatively long exposure time by said image pickup device, and an image signal of a short-time exposure image picked up

with a relatively short exposure time by said image pickup device (*English Machine Translation, page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*);

a synthesis section (*synthetic circuit 7 as shown in fig. 1*) for generating a composite image from said long-time exposure image and said short-time exposure image on the basis of a switch luminance signal level (*See figs. 6, 8-12)* determined from said image signals (*English Machine Translation, page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*);

a control section (*Gradation compression circuit 44 in conjunction with the coefficient value calculation circuit 45 as shown in fig. 7*) for compressing said composite image according to a luminance proportion in the image, and dynamically assigning a dynamic range of an output image to be outputted as a video signal (*English Machine Translation, page 6-7, ¶ 0045-0054; see also page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*); and

a compression section (*Gradation compression circuit 44 in conjunction with the coefficient value calculation circuit 45 as shown in fig. 7*) for compressing the dynamic range of said composite image on the basis of dynamic assignment of said dynamic range of said output image (*English Machine Translation, page 6-7, ¶ 0045-0054; see also page 2, ¶ 0006-0007; page 3, ¶ 0008-0010; page 5, ¶0028-0034*).

Although Okada discloses that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least the luminance proportion in the image (*English Machine Translation, page 6-7, ¶ 0045-0054*), Okada does not explicitly

disclose that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least a luminance region which occupies said composite image; and an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same.

However, Kusaka et al. discloses an imaging device (*See fig. 1*), having an image processing section (*Fig. 1: 7*) for generating a composite image, the composite image having a relatively wider dynamic range than at least either a dynamic range of a long-time exposure image picked up with a relatively long exposure time by said image pickup device or a dynamic range of a short-time exposure image picked up with a relatively short exposure time by said image pickup device, by synthesizing said long-time exposure image and said short-time exposure image. Kusaka further discloses that an exposure ratio (*D = TL/TS; see col. 10, lines 30-55*) of the relatively long exposure time (*TL; see col. 10, lines 30-55*) to the relatively short exposure time (*TS; see col. 10, lines 30-55*) is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same (*Kasuko discloses multiplying the short signal by a gain equivalent to the ratio in the amount of exposed light to the long signal (the ratio in exposure time) as shown in fig. 8c, and synthesizing them allowing expansion of the dynamic range. For example, when the ratio in the amount of exposure of the long signal to the short signal is 1:D, the dynamic range can be*

expanded by D times; see col. 6, line 63 – col. 7, line 32; col. 10, lines 30-55; col. 21, lines 25-57) (*The Examiner further notes that the claim recites "an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image <u>so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same</u>". It is noted that the recitation "<u>so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same</u>" appears to be an intended use for the multiplication of the ratio by the short-time exposure image. The new intended use for an old product does not make a claim to that old product patentable." In re Schreiber, 44 USPQ2d 1429 (Fed. Cir. 1997)*).

Therefore, taking the combined teaching of Okada in view of Kusaka et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of multiply the short-time exposure image by a ratio of the long signal time to the short signal time so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same as taught in Kusaka et al. to modify the teaching of Okada to have an exposure ratio of the relatively long exposure time to the relatively short exposure time is multiplied by the short-time exposure image so that an amount of input light of the long-time exposure image and the short-time exposure image is substantially the same. The motivation to do so would have been to allow further expansion of the dynamic range as suggested by Kusaka et al., (*See col. 6, line 63 – col. 7, line 32; col. 10, lines 30-55; col. 21, lines 25-57*).

The combined teaching of Okada in view of Kusaka et al. fails to teach that said control section dynamically varies said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least a luminance region which occupies said composite image

However, Tsukui discloses an image pickup apparatus (*Figs. 6 and 10*) characterized by comprising:

an image pickup device (*3 and 4 as shown in figs. 6 and 10*) for picking up an image of a subject;

a signal processing section (*Fig. 10: 50*) for generating a composite image from two images captured at different exposure times to increase the dynamic range of the image (*Col. 15, line 34 – col. 16, line 3*). Tsukui further discloses dynamically varying the assignment proportion of a high luminance dynamic range to a low-middle luminance dynamic range in a dynamic range of an output image to be outputted as a video signal (*Col. 10, lines 29-53; col. 11, lines 56-67; col. 12, lines 49-65; col. 13, lines 4-23; col. 14, lines 27-54; col. 15, lines 34-62*), wherein said discloses dynamically varying the assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range is made according to at least a luminance region which occupies said composite image (*Tsukui teaches that based on the proportion of high luminance area with respect to the proportion of low luminance area, a predetermined coefficient is multiplied to the different image signals when combining the signals to create the composed image having higher dynamic range; col. 15, line 34 – col. 16, line 3*). Tsukui further discloses that this is done to produce

an image of good color reproducibility without any solid blackening or solid whitening can be obtained even for an object high in contrast and since the composite video signal is obtained from the summed output video signals of the multipliers the output video signal level of the television camera can be made continuously change with the illumination of an object (*Col. 16, lines 38-49*).

Therefore, taking the combined teaching of Okada in view of Kusaka et al. and further in view of Tsukui as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of dynamically varying the assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range is made according to at least a luminance region which occupies said composite image as taught in Tsukui to modify the teaching of Okada and Kusaka et al. to have control section dynamically varying said assignment proportion of said high luminance dynamic range to said low-middle luminance dynamic range according to at least a luminance region which occupies said composite image. The motivation to do so would have been to produce an image of good color reproducibility without any solid blackening or solid whitening can be obtained even for an object high in contrast and since the composite video signal is obtained from the summed output video signals of the multipliers the output video signal level of the television camera can be made continuously change with the illumination of an object as suggested by Tsukui (*Col. 16, lines 38-49*).

28. **Regarding claim 24**, limitations have been discussed and analyzed in claim 4.

29. **Regarding claim 25**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said synthesis section acquires, from said short-time exposure image, pixels corresponding to at least a higher luminance signal level than said switch luminance signal level among pixels constructed in said composite image (*Okada, English Machine Translation, page 6-7, ¶ 0045-0054; Tsukui, col. 15, line 34 – col. 16, line 67; col. 10, line 54 – col. 11, line 67*).

30. **Regarding claim 26**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said synthesis section acquires, from said long-time exposure image, pixels corresponding to at least a lower luminance signal level than said switch luminance signal level among pixels constructed in said composite image (*Okada, English Machine Translation, page 6-7, ¶ 0045-0054; Tsukui, col. 15, line 34 – col. 16, line 67; col. 10, line 54 – col. 11, line 67*).

31. **Regarding claim 27**, limitations have been discussed and analyzed in claim 15.

32. **Regarding claims 28 and 29**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said control section determines a high luminance compression gain for compressing a luminance signal level of said composite image on the basis of at least the assignment proportion of a high luminance dynamic range of said output image to a low-middle luminance dynamic range thereof (*Tsukui discloses assigning coefficients to be multiplied by the two*

signals based on the luminance level of the signals, wherein the sum of said coefficients is equal to 1 so that when the luminance of the high brightness image signal is increased the coefficient for the high brightness signal is reduced while the coefficient for the low brightness image signal is increased and vice versa; col. 15, line 34 – col. 16, line 3).

33. **Regarding claim 30**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said control section further includes a compression gain calculation section for determining, for each luminance signal level of said composite image, at least either a final high luminance compression gain or a final low-middle luminance compression gain which are to be used by said compression section, on the basis of at least either said high luminance compression gain or said low-middle luminance compression gain (*Tsukui discloses assigning coefficients to be multiplied by the two signals based on the luminance level of the signals, wherein the sum of said coefficients is equal to 1 so that when the luminance of the high brightness image signal is increased the coefficient for the high brightness signal is reduced while the coefficient for the low brightness image signal is increased and vice versa; col. 15, line 34 – col. 16, line 3*).

34. **Regarding claim 31**, limitations have been discussed and analyzed in claim 5.

35. **Regarding claim 32**, limitations have been discussed and analyzed in claim 9.

36. **Regarding claim 33**, limitations presented in claim 31 have been discussed and analyzed in claim 23.

37. **Regarding claim 34**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said synthesis section selects said luminance signal level lower than said switch luminance signal level in said long-time exposure image, as a target for said composite image (*As shown in Tsukui, figs. 7 and 11, it is selected the portion of the signal of the long-time exposure that is lower that said switch (knee) luminance level; col. 15, line 34 – col. 16, line 67; col. 10, line 54 – col. 11, line 67; see also Okada, English Machine Translation, page 6-7, ¶ 0045-0054*).

38. **Regarding claim 35**, the combined teaching of Okada in view of Tsukui as discussed and analyzed in claim 23 further teaches that said synthesis section selects said luminance signal level higher than said switch luminance signal level in said short-time exposure image, as a target for said composite image (*As shown in Tsukui, figs. 7 and 11, it is selected the portion of the signal of the short-time exposure that is higher that said switch (knee) luminance level; col. 15, line 34 – col. 16, line 67; col. 10, line 54 – col. 11, line 67; see also Okada, English Machine Translation, page 6-7, ¶ 0045-0054*).

39. **Regarding claim 36**, limitations have been discussed and analyzed in claims 34 and 35.

40. **Regarding claim 37**, limitations have been discussed and analyzed in claim 15.

41. **Regarding claim 38**, limitations have been discussed and analyzed in claim 5.

Conclusion

42. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández Hernández whose telephone number is (571) 272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernández Hernández
Examiner
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